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Sir:

Transmitted herewith for filing under 37 C.F.R. §1.53(b) is the patent application of
Inventor(s): Aki NAGANOFor: TRANSACTION MANAGING APPARATUS AND METHOD AND RECORDING MEDIUM STORING TRANSACTION
MANAGING PROGRAM THEREIN

- XX Specification and Claims (52 pages)
 XX 31 sheets of drawings
 XX Newly executed Declaration and Power of Attorney
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 XX An assignment of the invention to Fujitsu Limited with accompanying PTO-1595 Form
 XX A certified copy of Japanese Application(s) No.(s) 11-298009 filed: October 20, 1999
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	(Col. 1)	(Col. 2)
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Small Entity	
RATE	FEE
	\$345
x 9 =	
x 39 =	
+130 =	
TOTAL	

Other Than A Small Entity	
RATE	FEE
	\$690
x 18 =	0
x 78 =	\$78
+260 =	0
	\$768

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Respectfully submitted,

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TRANSACTION MANAGING APPARATUS AND METHOD AND
RECORDING MEDIUM STORING TRANSACTION MANAGING
PROGRAM THEREIN

Field of the Invention

Description of the Related Arts

Hitherto, as for sales of goods in distribution
25 retail business, in addition to normal sales in which
payment and a receipt of goods are simultaneously
performed, there is an incomplete transaction in which

payment is made as prepayment, postpayment, payment by installments, or the like and the goods are delivered as predelivery, postdelivery, delivery by installments, or the like. In the incomplete transaction, when the transaction is started with the prepayment or the predelivery of goods, the contents of the transaction have to be continuously managed until the delivery of the goods or the payment is completed. As for the incomplete transaction, whether the timing to sum up the sales is set to the start of the transaction or the end of the transaction (at the time of completion of the payment of balance or at the time of the delivery of goods) is determined as necessary, and it is necessary to sum up the sales at the determined timing.

However, in the conventional sales of goods, there are: the case where systems are provided for POS terminals in accordance with the kinds of incomplete transactions such as transaction of prepayment and postdelivery of goods, transaction of predelivery of goods and postpayment, and the like and various transactions are individually managed every system; and the case where the incomplete transactions are managed on the basis of slips independently of such systems. Therefore, in order to perform the management of all of the incomplete transactions, the grasp of the situations, and the like, it takes long time, it is difficult to perform such management and grasp, and

5 According to the invention, there is provided a transaction managing apparatus for a POS terminal, in which management of all of the incomplete transactions, a grasp of situations thereof, and the like can be correctly performed in a short time and the kind of
10 incomplete transaction can be also correctly changed in a short time.

A transaction managing apparatus for a POS terminal according to the invention is characterized by comprising: a transaction defining unit for defining a plurality of kinds of incomplete transaction types by combining a plurality of predetermined categories; and a management control unit for designating one of the plurality of kinds of incomplete transaction types and managing and controlling the transaction from the start to the end thereof in a lump by an interactive operation with the operator. According to the invention, therefore, the plurality of incomplete transactions can be controlled and managed in a lump by one system, so that the management of all of the incomplete transactions, the grasp of situations thereof, and the like can be correctly performed in an extremely short time. It is also possible to correctly

change the control and management of the incomplete transaction in a short time merely by changing the designation of the incomplete transaction type.

There are the following categories to define the incomplete transaction types.

- (1) Method of tender such as prepayment, postpayment, payment by installments, or the like.
- (2) Setting of necessity/unnecessity of prepayment.
In case of necessity, the lowest percentage, the lowest amount, or the like is set.
- (3) Term for payment
- (4) Delivering method such as predelivery, postdelivery, delivery by installments, or the like
- (5) Scheduled delivery date in case of predelivery, postdelivery, or the like
- (6) Setting of permission/inhibition of predelivery.
For example, when a paid amount does not reach the price of goods, whether the delivery is possible or not is set.
- (7) Sales sum-up timing at the time of the start of the transaction, the completion of the payment, the completion of the transaction, or the like

The transaction defining unit of the present invention defines the incomplete transaction types by

combining at least three items of the sales sum-up timing, the presence or absence of necessity of the prepayment, and method of delivering goods.

As incomplete transaction types, for example, the transaction defining unit defines at least one of the following types A, B, C, and D.

Type A: Deferred pickup transaction on the principle of occurrence in which the sales are summed up upon occurrence of a transaction of a total amount prepayment.

Type B: Deferred pickup transaction on the principle of completion in which the sales are summed up upon completion of a transaction of the total amount prepayment.

Type C: Deferred payment transaction on the principle of occurrence in which the sales are summed up upon occurrence of a transaction of deferred payment sales with a specific customer.

Type D: Deferred payment transaction on the principle of completion in which the sales are summed up upon completion of a transaction of the deferred payment sales with a specific customer.

As for the deferred pickup transaction on the principle of occurrence of the type A, the transaction defining unit forms type code information having a

5 the delivery of goods is performed later on another day. When the incomplete transaction of the type A as a deferred pickup transaction on the principle of occurrence is designated, the management control unit

10 transaction and a delivering process upon completion of
the transaction. That is, as processes upon prepayment
at the start of the transaction, the following

15 of goods; a registration of goods; a registration of an amount of payment; a confirmation of the payment of the total amount; a display of an error in the case where the payment is not made yet; an issue of a customer copy with the slip number; and a sum-up of the sales.

20 As processes upon delivery at the time when the transaction is completed, a display of incomplete transaction information by the input of the slip number, a registration of the delivery, and a termination of the incomplete transaction are executed.

25 As for the deferred pickup transaction on the principle of completion of the type B, the transaction defining unit forms type code information having a

combination of the categories in which the sales sum-up
timing is set to the timing upon completion of the
transaction, to the prepayment of a total amount is
necessary, and to the delivery of goods is set to
5 postdelivery. When the incomplete transaction of the
type B as a deferred pickup transaction on the
principle of completion is designated, the management
control unit performs the prepaying process at the
start of the transaction and the delivering process
10 upon completion of the transaction. That is, as
processes upon prepayment at the start of the
transaction, the following processes are executed:
namely, an issue of a slip number of the incomplete
transaction; an input of a delivery date of goods; a
15 registration of goods; a registration of an amount of
payment; a confirmation of the total amount payment; a
display of an error in the case where the payment is
not made yet; and an issue of a customer copy with the
slip number. As processes upon delivery at the end of
20 the transaction, a display of incomplete transaction
information by the input of the slip number, a
registration of the delivery, a sum-up of the sales,
and a termination of the incomplete transaction are
executed. The type B differs from the type A only with
25 respect to a point that the sales sum-up timing in the
type A is set to the start of the transaction and that
in the type B is set to the completion of the

transaction.

With respect to the deferred payment transaction on the principle of occurrence of the type C, the transaction defining unit forms type code information having a combination of the categories in which the sales sum-up timing is set to the timing upon occurrence of the transaction, to the prepayment is unnecessary, and to the delivery of goods is set to a predelivery. When the incomplete transaction of the type C as a deferred payment transaction on the principle of occurrence is designated, the management control unit executes the prepaying process at the start of the transaction and the process upon payment. That is, as processes upon prepayment at the start of the transaction, the following processes are executed: namely, an issue of a slip number of the incomplete transaction; an input of a delivery date of goods; a registration of goods; a registration of an amount of payment including a zero amount; an issue of a customer copy with the slip number; a registration of a delivery; and a sum-up of the sales. As processes upon payment, a display of incomplete transaction information by the input of the slip number, a registration of the amount of payment, and a termination of the incomplete transaction in the case where a balance is equal to 0 are executed.

As for the deferred payment transaction on the

principle of completion of the type D, the transaction
defining unit forms type code information having a
combination of the categories in which the sales sum-up
timing is set to the timing upon completion of the
5 transaction, the prepayment is unnecessary, and the
delivery of goods is set to a predelivery. When the
incomplete transaction of the type D as a deferred
payment transaction on the principle of completion is
designated, the management control unit executes the
10 prepaying process at the start of the transaction and
the process upon payment. In other words, as processes
upon prepayment at the start of the transaction, the
following processes are executed: namely, an issue of a
slip number of the incomplete transaction; an input of
15 a delivery date of goods; a registration of goods; a
registration of an amount of payment including a zero
amount; a registration of a delivery; and an issue of a
customer copy with the slip number. As processes upon
payment, the following processes are executed: namely,
20 a display of incomplete transaction information by the
input of the slip number; a registration of the amount
of payment; a sum-up of the sales in the case where a
balance is equal to 0; and a termination of the
incomplete transaction. The type C differs from the
25 type D only to the point that the sales sum-up timing
in the type C is set to the start of the transaction
and that in the type D is set to the completion of the

transaction.

The transaction defining unit has, for example, an incomplete transaction management table, a type code table, an incomplete transaction line item information table, and a payment information management table. The
5 incomplete transaction management table stores basic management information such as store number, incomplete transaction slip number, type code, transaction serial number upon occurrence, date and time of occurrence,
10 customer number, requested amount, amount of down payment, balance, scheduled delivery date, delivery completion flag, sum-up possible/impossible flag, totalization completion flag, and the like. The type code table is designated by the type code in the
15 incomplete transaction management table and stores category combination information such as sales sum-up timing, prepayment necessary/unnecessary flag, predelivery possible/impossible flag, method of tender, delivering method, and the like. The incomplete
20 transaction detail information table is designated by the incomplete transaction slip number in the incomplete transaction management table and stores goods management information such as goods code, unit price, quantity, discount information, and the like.
25 Further, the payment information management table is designated by the incomplete transaction slip number in the incomplete transaction management table and stores

payment management information such as date and time
(time stamp) of payment, paid amount, kind of tender,
and the like. On the basis of each table information
of the transaction defining unit, the management
5 control unit displays the following lists as a whole
list or every type: namely, a list showing the
incomplete transactions; a list of the customers who do
not come to receive goods even after the scheduled
delivery date; a list of the customers who do not come
10 to pay after the term of payment; a list of the payment
situations; and the like. As information that is
stored in each table, each table does not need to have
all of the information that is listed up but the
invention includes a case where the table has proper
15 storage contents as necessary.

According to the present invention, there is
provided a transaction managing method for a POS
terminal, comprising the steps of:

20 defining a plurality of kinds of incomplete
transaction types by combining a plurality of
predetermined categories; and

designating one of the plurality of kinds of
incomplete transaction types by an interactive
operation with the operator and managing and
25 controlling processes in a lump from the beginning of
the transaction to the end.

According to the present invention, there is

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provided a recording medium which stores a management control program, wherein the management control program comprises the steps of: defining a plurality of kinds of incomplete transaction types by combining a plurality of predetermined categories; and designating one of the plurality of kinds of incomplete transaction types by an interactive operation with the operator and managing and controlling processes in a lump from the beginning of the transaction to the end.

10 The invention provides a transaction system, a plurality of terminal apparatuses are connected through a network to a server for managing transaction information, and each of those terminal apparatuses comprises: a transaction defining unit for defining a plurality of kinds of incomplete transaction types by combining a plurality of predetermined categories; and a management control unit for designating one of the plurality of kinds of incomplete transaction types by an interactive operation with the operator and managing and controlling processes in a lump from the beginning of the transaction to the end.

25 The above and other objects, features, and advantages of the present invention will become more apparent from the following detailed description with reference to the drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

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Figs. 10A to 10E are explanatory diagrams of operation picture planes in the delivering process in Fig. 9;

Fig. 11 is a flowchart for a paying process in the deferred pickup transaction on the principle of completion (type B);

Fig. 12 is a flowchart for a delivering process in the deferred pickup transaction on the principle of completion (type B);

Fig. 13 is a flowchart for a paying process in a deferred payment transaction on the principle of completion (type D);

Figs. 14A to 14E are explanatory diagrams of operation picture planes in the paying process in Fig. 13;

Fig. 15 is a flowchart for the paying process in the deferred payment transaction on the principle of completion (type D);

Figs. 16A to 16E are explanatory diagrams of operation picture planes in the paying process in Fig. 15;

Fig. 17 is a flowchart for the paying process in a deferred payment transaction on the principle of occurrence (type C);

Fig. 18 is a flowchart for the paying process in the deferred payment transaction on the principle of occurrence (type C);

Figs. 19A and 19B are explanatory diagrams of a display of list picture planes in the incomplete transaction; and

Figs. 20A and 20B are explanatory diagrams of another embodiment of a table structure provided for the transaction defining unit in Fig. 4.

5 DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

(Construction and functions)

Fig. 1 is an explanatory diagram of a POS system (point of service system) to which transaction managing apparatus and method of the invention are applied. The

10 POS system comprises a plurality of POS terminals 10-1 and 10-2, an LAN 12, a POS server 20, a server file 22, a host system 24, and a host file 26. Input/output apparatuses for POS such as bar code readers 14-1 and 14-2, printers 16-1 and 16-2, card readers 18-1 and 18-

15 2, and the like are provided for the POS terminals 10-1 and 10-2 as necessary. Although fig. 1 shows an example of the POS system of a large scale, in case of a POS system of a middle scale, the system is constructed by the POS server 20, server file 22, and

20 POS terminals 10-1 and 10-2. Further, in case of a system of a small scale such as a private store or the like, there is a case where the POS system is constructed only by the POS terminals 10-1 and 10-2. Such a POS system is installed in a store or the like

25 of the distribution retail business, performs a settlement by cash, a credit card, or the like in association with a purchase of goods, and sums up a

result of settlement. In the invention, each of the POS terminals 10-1 and 10-2 has a function to perform management and a control in a lump with respect to what is called an incomplete transaction in which the payment, the delivery of goods, and the like are performed at the different dates/hours in addition to the normal transaction in which the settlement of payment and the receipt of goods are performed at the time of purchase.

Fig. 2 shows an example of a program structure of the POS terminal 10-1 in Fig. 1. The POS terminal 10-1 is provided with: a POS application 28; a retail application frame work technology 30 as middle software; an OS 32; and an IOPOS 34 for standardizing the input/output apparatuses for the purpose of POS. The bar code reader 14-1, printer 16-1, and card reader 18-1 are connected to the IOPOS 34, thereby enabling them to be handled as standardized input/output apparatuses as compared with the retail application frame work technology 30. The retail application frame work technology 30 also communicates with the POS server 20 in Fig. 1. The function of the transaction managing apparatus for an incomplete transaction according to the invention is realized by the retail application frame work technology 30 and POS application 28 in the POS terminal 10-1 in Fig. 2.

Fig. 3 is a block diagram of a functional

construction of the transaction managing apparatus according to the invention which is provided for the POS terminals 10-1 and 10-2 in Fig. 1 and is used for managing and controlling the incomplete transaction in a lump. The transaction managing apparatus of the invention is constructed by a transaction defining unit 36 and a management control unit 38. A database 40 is provided for the transaction defining unit 36.

Input/output apparatuses such as incomplete transaction picture plane display unit 42, key input unit 46, bar code reader 14, slip issuing unit 48, and the like are provided for the management control unit 38. When considering the correspondence with the program structure in Fig. 2, the function of the transaction defining unit 36 is realized by the retail application frame work technology 30 and the management control unit 38 is realized by the POS application 28. The transaction defining unit 36 defines a plurality of kinds of incomplete transaction types by combining a plurality of predetermined categories with respect to the incomplete transaction. In association with the definition of the incomplete transaction types, an incomplete transaction management table 50, a type code table 52, an incomplete transaction detail information table 54, and a payment information management table 56 are provided for the transaction defining unit 36. Among them, the type code table 52 functions as a

definition table in which a plurality of kinds of incomplete transaction types are defined by combining a plurality of categories. The management control unit 38 designates one of the incomplete transaction types defined by the transaction defining unit 36 by the interactive operation with the operator and manages and controls processes in a lump from the beginning of the transaction to the end. In the embodiment, in the transaction defining unit 36, since it is assumed that four types A, b, C, and D are defined as an example as will be explained hereinlater, a type A management control unit 58, a type B management control unit 60, a type C management control unit 62, and a type D management control unit 64 are provided for the management control unit 38. Further, incomplete transaction information 66 and normal transaction information 68 are provided for the database 40. Each transaction information formed by the transaction operation of the POS terminal is recorded. An item name table 70 and a price lookup table (PLU) 72 are provided for the database 40. The item name table 70 is constructed by an item number code and an item name. The item number code and the item name can be recognized with reference to the item name table 70 based on the code read out by the bar code reader 14. The price lookup table 72 is constructed by the item number code and the price. Therefore, the price can be

recognized by seeing the price lookup table 72 on the basis of the item number code derived with reference to the item name table 70.

Figs. 4A and 4B are explanatory diagrams of the details of each table provided for the transaction defining unit 36 in Fig. 3 and its link structure. The incomplete transaction management table 50 has basic information for incomplete transaction. That is, the incomplete transaction management table 50 is provided with: a store number, an incomplete transaction serial number (incomplete transaction slip number), a type code indicative of an incomplete transaction type, a transaction serial number upon occurrence, date and time of occurrence, a customer number, a status code, final updating date and time, an employee ID upon occurrence, a requested amount, an amount of down payment, a balance, a scheduled delivery date, a delivery completion flag, a sum-up possible/impossible flag, a totalization completion flag, and the like. The incomplete transaction detail information table 54 and payment information management table 56 can be referred to on the basis of the store number and the incomplete transaction serial number in the incomplete transaction management table 50. A store number, an incomplete transaction serial number, a line item number, line item information, and the like have been stored in the incomplete transaction detail information

table 54. A store number, an incomplete transaction serial number, a payment processing store number, a transaction serial number upon payment, date and time of payment, a paid amount, a kind of tender, an employee ID upon payment, and the like have been stored in the payment information management table 56. The type code table 52 can be referred to on the basis of the type code in the incomplete transaction management table 50. The type code table 52 is a table for defining a plurality of kinds of incomplete types by combining a plurality of predetermined categories in the transaction defining unit 36 in Fig. 3. In the embodiment, a plurality of categories such as type code, sum-up timing, payment necessary/unnecessary flag, predelivery possible/impossible flag, method of tender, delivering method, and the like are provided in the type code table 52. The type of incomplete transaction is determined by a combination of those categories. Each category in the type code table 52 will now be described as follows. First, a timing at the start of the transaction, a timing upon completion of the payment, a timing upon completion of the delivery, and the like can be set as sum-up timings. The prepayment necessary/unnecessary flag is used to set the presence or absence of the necessity of the prepayment in the incomplete transaction. In this case, if the prepayment is necessary, the lowest

percentage, the lowest amount, or the like can be set. The next predelivery possible/impossible flag is a flag for setting whether the predelivery of goods is possible or not. For example, when the paid amount does not reach the goods price, a condition about whether the predelivery is possible or not or the like is set. A prepayment, a postpayment, a payment by installments, or the like is set as a method of tender. There is a predelivery, a postdelivery, a delivery by installments, or the like as a delivering method. A scheduled delivery date can be also set in association with the delivering method. As for the scheduled delivery date, an appointed day is set in case of predelivery and a date determined as a default, for example, a date after five business days or the like is set in case of postdelivery. Among those categories in the type code table 52, there are the following items as minimum categories necessary for incomplete transaction in the invention.

- I. sum-up timing
- II. prepayment necessary/unnecessary flag
- III. delivering method

The type of incomplete transaction can be defined by combining the other categories with those three basic categories as necessary.

Figs. 5A to 5D are explanatory diagrams of a type code table in which four types A, B, C, and D have been

defined as types of the incomplete transaction. Fig. 5A shows a type code table 74 for the deferred pickup transaction and on the principle of occurrence corresponding to the type A. The incomplete

5 transaction of the type A is an unsettled transaction of the prepayment of a total amount and is a deferred pickup transaction on the principle of occurrence in which the sales are summed up upon occurrence of the transaction. Therefore, in the type code table 74 for
10 the deferred pickup transaction and on the principle of occurrence, the type code A is first defined. Subsequently, "upon occurrence of transaction" is defined as a sum-up timing. "necessary" is defined as a prepayment necessary/unnecessary flag. "total
15 amount" is defined as attribute information. "postdelivery" is defined as a delivering method. Thus, the type designation of the incomplete transaction by the three basic categories is performed. Further, "after 5 business days" is set as a default of
20 the scheduled delivery date. Fig. 5B is an explanatory diagram of a type code table 76 in which the incomplete transaction of the type B is defined. The incomplete transaction of the type B is an incomplete transaction of the prepayment of a total amount and is a deferred
25 pickup transaction on the principle of completion in which the sales are summed up upon completion of the transaction. Therefore, in the type code table 76 for

Subsequently, "at the end of transaction" is defined as a sum-up timing. The subsequent prepayment necessary/unnecessary flag, delivering method, and scheduled delivery date are the same as those in case of the type code table 74 in Fig. 6A. Fig. 5C is an explanatory diagram of a type code table 78 in which the incomplete transaction of the type C is defined. The incomplete transaction of the type C is an unsettled transaction in which deferred payment sales are made for a specific customer and is a deferred payment transaction on the principle of occurrence in which the sales are summed up upon occurrence of the transaction. Therefore, in the type code table 78 for the deferred payment transaction and on the principle of occurrence, the type code C is defined. "upon occurrence of transaction" is defined as a sum-up timing. "unnecessary" is defined as a payment necessary/unnecessary flag because of the deferred payment transaction of deferred payment sales, "predelivery" is defined as a delivering method, and further, "appointed day" as a default is defined as a scheduled delivery date. Fig. 5D is an explanatory diagram of a type code table 80 in which the incomplete transaction of the type D is defined. The incomplete transaction of the type D is an unsettled transaction

in which deferred payment sales are made for a specific customer and is a deferred payment transaction on the principle of completion in which the sales are summed up upon completion of the transaction. In

5 correspondence to the unsettled transaction types A, B, C, and D defined in the type code tables 74, 76, 78, and 80, in Figs. 5A to 5D, the control functions of the type A management control unit 58, type B management control unit 60, type C management control unit 62, and
10 type D management control unit 64 are provided for the management control unit 38 in Fig. 3. Each of the management control units 58, 60, 62, and 64 manages and controls all of the incomplete transactions separately with respect to the process at the time of prepayment
15 in which the incomplete transaction is started and the process in which the goods delivery or the payment is made.

Fig. 6 is a fundamental flowchart for the control process with respect to the incomplete transaction by
20 the transaction managing apparatus according to the invention of Fig. 3. First, when an incomplete operation key is depressed in order to declare the incomplete transaction by using the operation picture plane of the POS terminal, it is discriminated in step
25 S1. An incomplete transaction menu is displayed in step S2. When the incomplete transaction menu is displayed, two menus of "transaction upon payment" in

which the incomplete transaction is started and
"transaction upon delivery" (including "transaction
upon payment") in which the incomplete transaction is
completed are displayed. When the menu of "transaction
5 upon payment" indicative of the start of the incomplete
transaction is selected, the processing routine
advances from step S3 to step S4. The process upon
payment according to the type designated at that time
is executed. When the start of the incomplete
10 transaction is not selected in step S3, whether the
incomplete transaction delivery has been selected or
not is discriminated in step S5. If the delivery is
selected, step S6 follows and the process upon delivery
according to the slip number is executed. The
15 processes in steps S1 to S6 are repeated until there is
an end instruction to the POS terminal in step S7.
When the incomplete operation key is not depressed in
step S1, the processing routine advances to the process
for the normal transaction (not shown).

20

(Deferred pickup transaction)

Fig. 7 is a flowchart for a process upon
prepayment in step S4 in Fig. 6 in the case where the
incomplete transaction type A as a deferred pickup
25 transaction on the principle of occurrence has been
designated. In the process upon payment for starting
the transaction in the deferred pickup transaction on

the principle of occurrence, first, in step S1, the delivery date of goods is inputted. As a delivery date of goods, "after 5 business days" is displayed as a default in the type code table 74 in Fig. 5A. If this date is wrong, it is corrected by a manual input or the like. In step S2, the registration of goods using the bar code reader or the like is executed in step S2 in a manner similar to the normal transaction. In step S3, the amount of payment is registered. In the deferred pickup transaction on the principle of occurrence of the type A, the prepayment necessary/unnecessary flag is set to "necessary (total amount)" with reference to the type code table 74 in Fig. 5A. Therefore, after the amount of payment was registered, whether the total amount has been paid or not is discriminated in step S4. If the total amount is not paid, an error is displayed in step S7. The registration of the amount of payment is executed again in step S4. If the total amount was paid in step S4, step S5 follows and a customer copy with the incomplete transaction slip number is issued by the printer. Finally, the sales are summed up in step S6. That is, the sales are summed up at the start of the incomplete transaction in the deferred pickup transaction on the principle of occurrence of the type A.

Figs. 8A to 8D and 9 are explanatory diagrams of operation picture planes of the POS terminal in the

process upon payment of the deferred pickup transaction on the principle of occurrence in Fig. 7. Fig. 8A shows a sales registration picture plane 82 shown as an initial picture plane of the POS terminal. A bar code display frame 84 and a goods information list 85 which are used for the normal sales registration are displayed in an empty state onto the sales registration picture plane 82. Further, a check box 86 for the incomplete transaction is provided on the lower side.

In the normal sales registration, when a bar code scan of the goods is performed, a bar code (numeral) is automatically displayed in the bar code display frame 84 (it can be also manually inputted by a key input) and a name, a price, and the like of the goods are displayed in the goods information list 85. Therefore, the start of the incomplete transaction is first declared. As for the declaration of the start of the incomplete transaction, the check box 86 of the incomplete transaction on the sales registration picture plane 82 is selected by clicking the mouse, depressing the operation key, pressing a touch panel, or the like, thereby inverting it to a state shown in black (hereinbelow, this operation is merely referred to as "selection of check box"). The screen is switched to an incomplete transaction menu picture plane 88 of Fig. 8B by the declaration of the start of the incomplete transaction. Check boxes 90 and 92 are

provided on the incomplete transaction menu picture plane 88 with respect to the transaction upon payment and the transaction upon delivery. The check box 90 of the transaction upon payment is selected. The screen
5 is switched to an incomplete transaction type selection picture plane 94 of Fig. 8C by the selection of the check box 90. Check boxes 96, 98, 100, and 102 of four types of the deferred pickup transaction (on the principle of occurrence), deferred payment transaction
10 (on the principle of occurrence), deferred pickup transaction (on the principle of completion), and deferred payment transaction (on the principle of completion) are provided on the incomplete transaction type selection picture plane 94. Since the transaction
15 is the deferred pickup transaction on the principle of occurrence, the check box 96 is selected. Subsequently, the screen is switched to a delivery date input picture plane 104 in the deferred pickup transaction of Fig. 8D. Assuming that the current date
20 of the start of the transaction is set to September 23, 1999, "19990928" indicative of "after 5 business days" of the default is displayed in an input frame 106 of the delivery date input picture plane 104. If a
25 manual input or the like. In this state, the bar code of the goods is read by the bar code reader or the like, the goods is registered, a payment for the

displayed price is received from the customer, its payment registration is performed, and in case of a total amount, a customer copy on which the incomplete transaction slip number has been recorded is issued by the printer. If the amount of payment at the time of the payment registration is not equal to the total amount, an error display or the like is performed.

Fig. 9 is a flowchart for a process upon delivery which is performed after the process upon payment of the incomplete transaction type A in Fig. 7. In the process upon delivery, with reference to the customer copy handed upon payment in step S1, the incomplete transaction slip number is inputted. On the basis of the input of the slip number, the relevant incomplete transaction is displayed in step S2. The goods is handed on the basis of the display contents and a registration key is depressed. When the registration key is depressed in step S3, step S4 follows and a process for completing the incomplete transaction is executed. With respect to the contents of the incomplete transaction displayed in step S2, if the goods delivery has already been registered, an error display or the like is performed. Since the registration key is not selected, step S5 follows. Whether the delivery has been performed or not is discriminated from the registration contents. The processing routine is finished.

Figs. 10A to 10E are explanatory diagrams of operation picture planes for the process upon delivery in the incomplete transaction type A in Fig. 9. When the declaration of the incomplete transaction on the sales registration picture plane in Fig. 10A is selected by the check box 86, since the screen is switched to the incomplete transaction menu picture plane 88 of Fig. 10B, the transaction upon delivery is designated by selecting the check box 92. Thus, the screen is switched to a slip number input picture plane 108 of Fig. 10C. Therefore, by inputting the slip No. "0000001" recorded on the received customer copy slip, the screen is switched to an incomplete transaction confirmation picture plane 112 of Fig. 10D. Status display boxes 116 and 118 with respect to a sales date, a sales amount, a balance, a delivery date, completion of payment, and "delivered" are provided for the incomplete transaction confirmation picture plane 112 in correspondence to the slip number, respectively. When the registration key is operated, therefore, the status display box 118 of "delivered" is set to "delivered" and a series of incomplete transaction is finished. In the case where the screen is switched to an incomplete transaction confirmation picture plane 112 of Fig. 10E when the slip number is inputted in Fig. 10C, since the status display box 118 has already been set to "the goods has already been delivered", a

message indicating this fact or the like is displayed and a series of processes is finished.

Fig. 11 is a flowchart for a process upon payment in the deferred pickup transaction on the principle of completion corresponding to the incomplete transaction type B. In the process upon payment in the deferred pickup transaction on the principle of completion, the check box 86 of the incomplete transaction is clicked on the sales registration picture plane 82 as shown in Fig. 8A, the check box 90 of the transaction upon payment is selected on the incomplete transaction menu picture plane 88 in Fig. 8B, and subsequently, the check box 100 of the deferred pickup transaction (on the principle of completion) is selected on the incomplete transaction type selection picture plane 94 of Fig. 8C, thereby activating such a process upon payment. First, in step S1, the delivery date of goods is inputted by using the same delivery date input picture plane 104 as that of Fig. 8D. Also in this case, "after 5 business days" of a default as a scheduled delivery date set in the type code table 76 in Fig. 5B is displayed. If it is necessary to correct the delivery date, it is corrected by a manual input or the like. Subsequently, in step S2, a registration of the goods is performed by reading the bar code of the goods by using the bar code reader or the like in a manner similar to the case of the normal transaction.

An amount of payment is registered in step S3. In this case, since it is recognized from the type code table 76 in Fig. 5B that the prepayment is necessary and the total amount is necessary, when it is confirmed in step 5 S4 that the total amount has been paid, a customer copy with the incomplete transaction slip number is issued in step S5. If the total amount is not paid in step S4, an error display or the like is performed in step S6. The registration of the paid amount from step S3 10 is executed again. In the process upon payment in the deferred pickup transaction on the principle of completion in Fig. 11, a point that the sum-up of sales amounts is not performed in the process upon payment differs from the case of the deferred pickup 15 transaction on the principle of occurrence of the type A shown in Fig. 7.

Fig. 12 is a flowchart for a process upon delivery in the deferred pickup transaction on the principle of completion which is executed at the time of the 20 delivery of goods after the process upon payment in Fig. 11. Also in the process upon delivery, first, when the check box 86 of the incomplete transaction is selected on the same sales registration picture plane 82 as that of Fig. 10A and the check box 92 upon 25 delivery is selected on the incomplete transaction menu picture plane 88 of Fig. 10B, the slip number input picture plane 108 of Fig. 10C is displayed. By

inputting the incomplete transaction slip number recorded on the customer copy in step S1, the incomplete transaction confirmation picture plane 112 similar to that of Fig. 10D is displayed in step S2.

5 After it is confirmed that the payment is not finished, by clicking the registration key, the processing routine advances from step S3 to step S4. At this time point, the sales are summed up and the incomplete transaction is completed. In the case where the
10 confirmation display picture plane of the incomplete transaction in step S2 indicates that the status display box 118 indicates "delivered" as shown in Fig. 10E, the processing routine is finished.

15 (Deferred payment transaction)

Fig. 13 is a flowchart for a process upon payment in the case where the incomplete transaction type D as a deferred payment transaction on the principle of completion is selected in the embodiment of Fig. 3. In
20 the registering process of the incomplete transaction type D, first, the check box of the incomplete transaction 86 is selected on the sales registration picture plane 82 as shown in Fig. 14A and the incomplete transaction is declared. Subsequently, the
25 check box 92 of the transaction upon delivery is clicked by using the incomplete transaction menu picture plane 88 in Fig. 14B and the check box 102 of

14C, so that the process is started. When the process
5 is started, an input picture plane 115 of the delivery
date of goods in Fig. 14D is displayed in step S1.
"delivery on the appointed day (19990923)" which has
been set in the scheduled delivery date in the type
code table 80 in Fig. 5D is displayed as a default in a
10 date input frame 115-1 on the input picture plane of
the delivery date of goods. Subsequently, in step S2
in Fig. 13, the bar code of the goods is read by using
the bar code reader, thereby registering the goods in a
manner similar to the normal transaction. When the
15 registration of the goods is finished, in this deferred
payment transaction, since it is recognized from the
type code table 80 in Fig. 5D that the delivering
method has been set to "predelivery" and the scheduled
delivery date has been set to "appointed day", an
20 incomplete transaction confirmation picture plane 116-1
of Fig. 14E is displayed in order to confirm the
delivery. Therefore, it is confirmed that when the
registration key is clicked with respect to the
incomplete transaction confirmation picture plane 116-
25 1, a status display box 126 of "delivered" on the
incomplete transaction confirmation picture plane 116-1
is set to "delivered". An amount of payment is

registered in step S4. In this deferred payment transaction, since it is valid, even if the amount of payment is equal to zero, the zero amount of payment is registered. A customer copy with the incomplete transaction slip number is issued in step S5. Since the deferred payment transaction is based on the principle of completion, the sum-up of the sales is not performed at this time point of the process upon payment.

Fig. 15 shows a process upon payment in the incomplete transaction type D which is executed in the case where there is a balance in the process upon payment in Fig. 13. With respect to the process upon payment of the deferred payment transaction, the check box 86 of the incomplete transaction on the sales registration picture plane 82 is selected as shown in Fig. 16A and the incomplete transaction is declared and the check box 92 of the transaction upon delivery is selected on the incomplete transaction menu picture plane 88 of Fig. 16B, so that the screen is switched to the slip number input picture plane 115 of Fig. 16C. Therefore, in the paying process of the deferred payment transaction (on the principle of completion) in Fig. 15, first, when the incomplete transaction slip number recorded on the customer copy is inputted in step S1, an incomplete transaction confirmation picture plane 116-2 of Fig. 16D is displayed in step S2.

Subsequently, in step S3, whether the transaction has been completed or not is discriminated. If NO, a balance on the incomplete transaction confirmation picture plane 116-2 is equal to, for example, "¥25,000" as shown in Fig. 16D. Therefore, the registration key is clicked in step S4 for the purpose of payment. An amount of payment is registered in step S5. Whether the balance is equal to zero or not is now discriminated in step S6. If it is equal to zero, the sales are summed up and the incomplete transaction is completed in step S7. A customer copy with the incomplete transaction slip number is issued in step S8. When the transaction is completed in step S3, for example, in the case where a status display box 124 indicative of the zero balance and the completion of the payment and the check box 126 indicative of "paid and delivered" show the completion as shown on, for example, an incomplete transaction confirmation picture plane 116-3 of Fig. 16E, the processes in steps S4 to S7 are skipped. Since the process upon payment of the deferred payment process has already been finished, a customer copy with the incomplete transaction slip number is issued in step S8 and the processing routine is finished.

Fig. 17 is a flowchart for a process upon prepayment of the incomplete transaction type C as a deferred payment transaction on the principle of

occurrence. The processes from the input of the delivery date of goods in step S1 to the issue of a customer copy with the incomplete transaction slip number in step S5 are substantially the same as those in steps S1 to S5 for the process upon payment in the incomplete transaction type D (deferred payment transaction on the principle of completion) of Fig. 13. Since the transaction is based on the principle of occurrence in addition to those processes, Fig. 17 differs from Fig. 13 with respect to a point that the sales are summed up in step S6.

Fig. 18 is a flowchart for a process upon payment which is executed later on another day in the case where the balance is not equal to zero in the process upon payment in Fig. 17. Although the process upon payment is fundamentally the same as the process upon payment of the incomplete transaction type D (deferred payment process on the principle of completion) shown in Fig. 15, since the transaction is based on the principle of occurrence, Fig. 18 differs from Fig. 15 with respect to a point that the incomplete transaction is completed without summing up the sales in step S7. The other points are substantially the same as those in Fig. 15.

Figs. 19A and 19B show specific examples of a list display which can be displayed by the transaction managing apparatus according to the invention in Fig.

3. In the transaction managing apparatus of the invention, with respect to the incomplete transactions which are managed in a lump, the contents of the incomplete transactions can be displayed as a list as a whole list or every type. Fig. 19A shows a list display with respect to all of the incomplete transactions. All of situations of the incomplete transactions as of October 01, 1999, are displayed on an incomplete transaction list picture plane 128. In the list display, items of the slip number, date and time of occurrence, an amount of payment, and a type are displayed every incomplete transaction. This list picture plane is scroll displayed and results of totalization of the totals, the number of incomplete transactions, the number of transactions per type, the number of complete transactions, the number of delivery waiting transactions, the number of payment waiting transactions, and the like can be also displayed on the final page. Fig. 19B shows a display picture plane of a list of customers who do not come to receive the goods even after the expiration of the scheduled delivery date with regard to all of the incomplete transactions. A slip number, date and time of occurrence, a scheduled delivery date, and a type are displayed on an untake-over customer list picture plane 132. Besides them, an incomplete transaction list picture plane and an untake-over customer list picture

plane classified for each of the types A to D can be displayed. Further, also with respect to the unpayment customers who do not come to pay for the goods even after the expiration of the term for payment, lists of unpayment customers can be displayed as for all of the incomplete transactions and every type. Further, a list of payment situations can be displayed.

Figs. 20A and 20B show another embodiment of a table structure which is provided for the transaction defining unit 36 in Fig. 3. In this table structure, an option table 136, a payment schedule information table 138, a discount information table 140 are further added to the tables of Figs. 4A and 4B. In association with them, an option code and a payment schedule code are newly added to the incomplete transaction management table 50. The option code is linked to the option table 136. Handling methods for the unpayment persons such as option code, incomplete transaction longest period, method after the elapse of the longest period, commission on postpayment, and the like are defined in the option table 136. The payment schedule code added to the incomplete transaction management table 50 is linked to the payment schedule information table 138. Information regarding the payment by installments such as payment schedule code, lowest percentage of prepayment, the number of paying times, term for payment, payment schedule, and the like is

defined in the payment schedule information table 138.

Further, subsequent to the store number and the incomplete transaction serial number, information regarding the discount such as line item number,

5 discount information, and the like is defined in the discount information table 140 which is linked by the store number and the incomplete transaction serial number in the incomplete transaction management table 50. As mentioned above, as a table structure of the transaction defining unit 36 in Fig. 3, the contents of the incomplete transaction can be defined in detail as necessary by the table structure with respect to a proper category of the incomplete transaction and, further, items which determine the transaction
10 contents. The item contents of each table can be properly defined as necessary in accordance with the contents of the incomplete transaction.

As described above, according to the invention, a plurality of kinds of incomplete transaction types are defined in combination of a plurality of predetermined categories, one of the incomplete transaction types is designated by the interactive operation with the operator, and the processes from the start of the transactions to the end can be managed and controlled
20 in a lump, so that a batch control and a batch management of a plurality of incomplete transactions can be performed by one system. Therefore, management

of all of the incomplete transactions, a situation
grasp, and the like which have been difficult so far
can be accurately performed in an extremely short time.
Further, since the incomplete transactions are
5 classified into types according to the combination of
the categories, the management control method of the
incomplete transaction can be accurately changed in a
short time merely by designating the type.

Although the above embodiment relates to the
10 example of the transactions of four incomplete
transaction types A to D defined by the type code table
in Figs. 5A to 5D, the incomplete transaction type can
be arbitrarily determined as necessary by a plurality
of combinations of the categories including at least
15 the sum-up timing, prepayment necessary/unnecessary
flag, and delivering method. In the actual incomplete
transaction, it is not limited to the case of a
plurality of types but there is also a case where it
has an incomplete transaction of only a specific type.
20 In such a case, therefore, the processes regarding the
incomplete transaction of the type which has previously
been defined are executed merely by declaration of the
incomplete transaction. The invention further provides
a computer-readable recording medium on which an
25 incomplete transaction managing program has been
recorded. Therefore, as a recording medium for this
purpose, a proper portable recording medium such as FD,

CD-ROM, DVD, or the like can be used. A program for incomplete transaction which is stored in the recording medium has the function of the transaction defining unit 36 and the function of the management control unit 38 in Figs. 4A and 4B. In this case, since the transaction defining unit 36 is realized by, for example, the retail application frame work technology 30 in Fig. 2, an independent program in this portion can be realized. Since the program for the management control unit 38 is realized as a POS application 28, an independent program in this portion can be realized.

The invention incorporates many proper modifications and variations without departing from the objects and advantages of the invention. Further, the invention is not limited by the numerical values shown in the embodiment.

WHAT IS CLAIMED IS:

1. A transaction managing apparatus, comprising:
- a transaction defining unit for defining a plurality of kinds of unsettled transaction types by combining a plurality of predetermined categories; and
- a management control unit for designating one of said plurality of kinds of unsettled transaction types by an interactive operation with the operator and managing and controlling processes in a lump from the start of the transaction to the end.
2. An apparatus according to claim 1, wherein said transaction defining unit defines the unsettled transaction types by combining at least a sales sum-up timing, the presence or absence of necessity of prepayment, and a delivering method of goods as said categories.
3. An apparatus according to claim 2, wherein as said unsettled transaction types, said transaction defining unit defines at least one of:
- an unsettled transaction of prepayment of a total amount, namely, a deferred pickup transaction on the principle of occurrence in which sales are summed up upon occurrence of the transaction;
- an unsettled transaction of prepayment of a total amount, namely, a deferred pickup transaction on the

5

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sequentially executes, as processes upon
prepayment, an issue of an incomplete transaction slip

5

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5 sequentially executes, as processes upon delivery,
a display of incomplete transaction information by an
input of the slip number, a registration of a delivery,
a sum-up of sales amounts, and a termination of the
incomplete transaction.

20 9. An apparatus according to claim 8, wherein in the case where said deferred payment transaction on the principle of occurrence is selected as an unsettled transaction type, said management control unit:

sequentially executes, as processes upon
25 prepayment, an issue of an incomplete transaction slip
number, an input of a delivery date of goods, a
registration of goods, a registration of an amount of

sequentially executes, as processes upon payment,
5 a display of incomplete transaction information by the
input of said slip number, a registration of an amount
of payment, and in case of a zero balance, a
termination of the incomplete transaction.

11. An apparatus according to claim 10, wherein in the
20 case where said deferred payment transaction on the
principle of completion is selected as an unsettled
transaction type, said management control unit:

sequentially executes, as processes upon
prepayment, an issue of an incomplete transaction slip
25 number, an input of a delivery date of goods, a
registration of goods, a registration of an amount of
payment including a zero payment, an issue of a

customer copy with said slip number, and a registration of a delivery; and

sequentially executes, as processes upon payment, a display of incomplete transaction information by the
5 input of said slip number, a registration of an amount of payment, a sum-up of sales amounts in case of a zero balance, and a termination of the incomplete transaction.

10 12. An apparatus according to claim 1, wherein:

said transaction defining unit has an incomplete transaction management table, a type code table, an incomplete transaction line item information table, and a payment information management table;

15 basic management information such as store number, incomplete transaction slip number, type code, transaction serial number upon occurrence, date and time of occurrence, customer number, requested amount, amount of down payment, balance, scheduled delivery
20 date, delivery completion flag, sum-up possible/impossible flag, totalization completion flag, and the like is stored in said incomplete transaction management table;

said type code table is designated by a type code
25 of said incomplete transaction management table, and category combination information such as sum-up timing, prepayment necessary/unnecessary flag, predelivery

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possible/impossible flag, method of tender, delivering method, and the like is stored in said type code table;

5 said incomplete transaction line item information table is designated by an incomplete transaction slip number in said incomplete transaction management table, and goods management information such as goods code, unit price, quantity, discount information, and the like is stored in said incomplete transaction line item information table; and

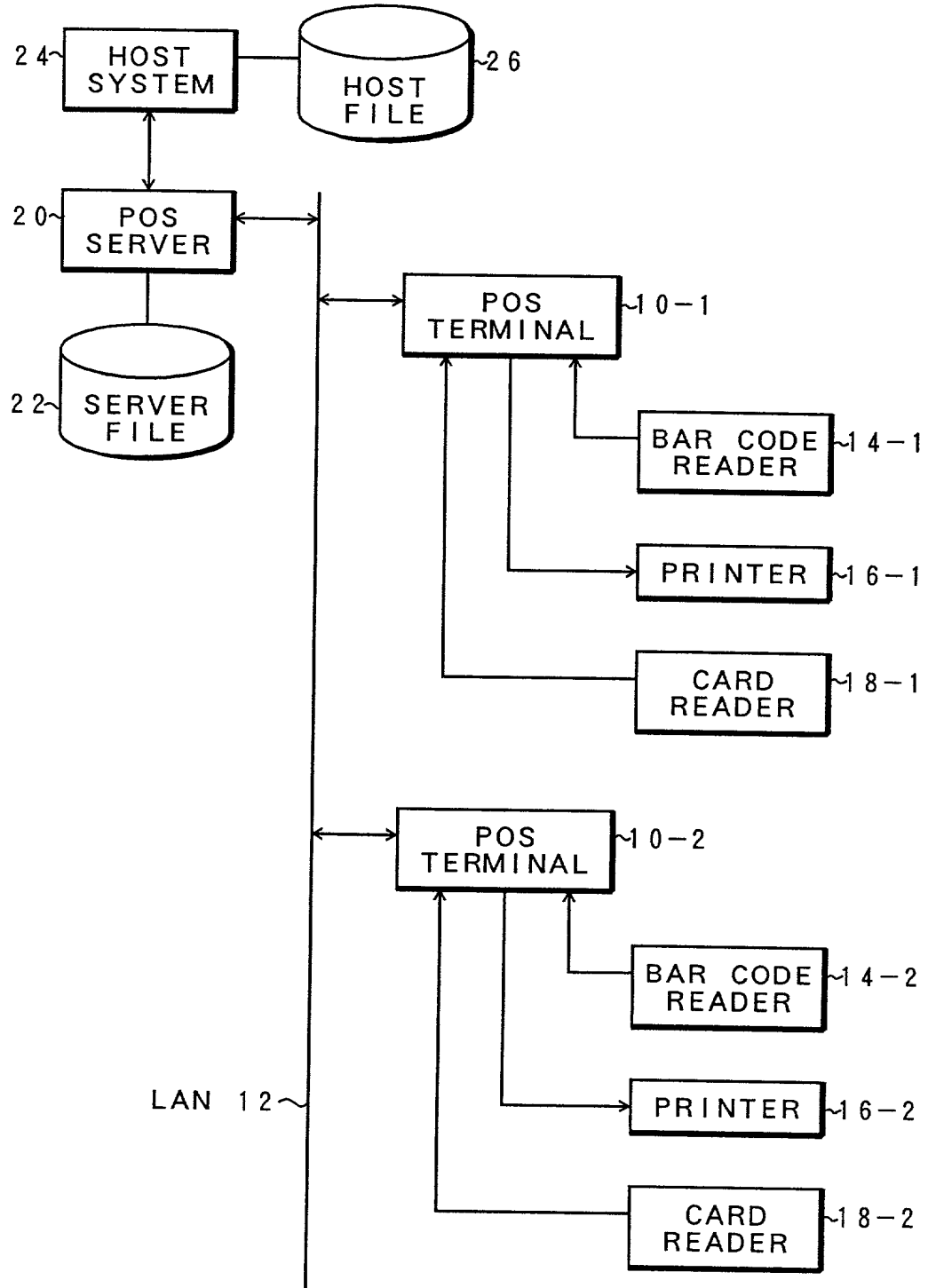
10 said payment information management table is designated by an incomplete transaction slip number in said incomplete transaction management table, and payment management information such as date and time of payment, paid amount, kind of tender, and the like is
15 stored in said payment information management table.

13. An apparatus according to claim 12, wherein on the basis of each table information of said transaction defining unit, said management control unit displays a
20 list showing the incomplete transactions, a list of the customers who do not come to receive goods even after the scheduled delivery date, a list of the customers who do not come to pay after the term of payment, a list of the payment situations, and the like as a whole
25 list or every type.

14. A transaction managing method for a POS terminal,

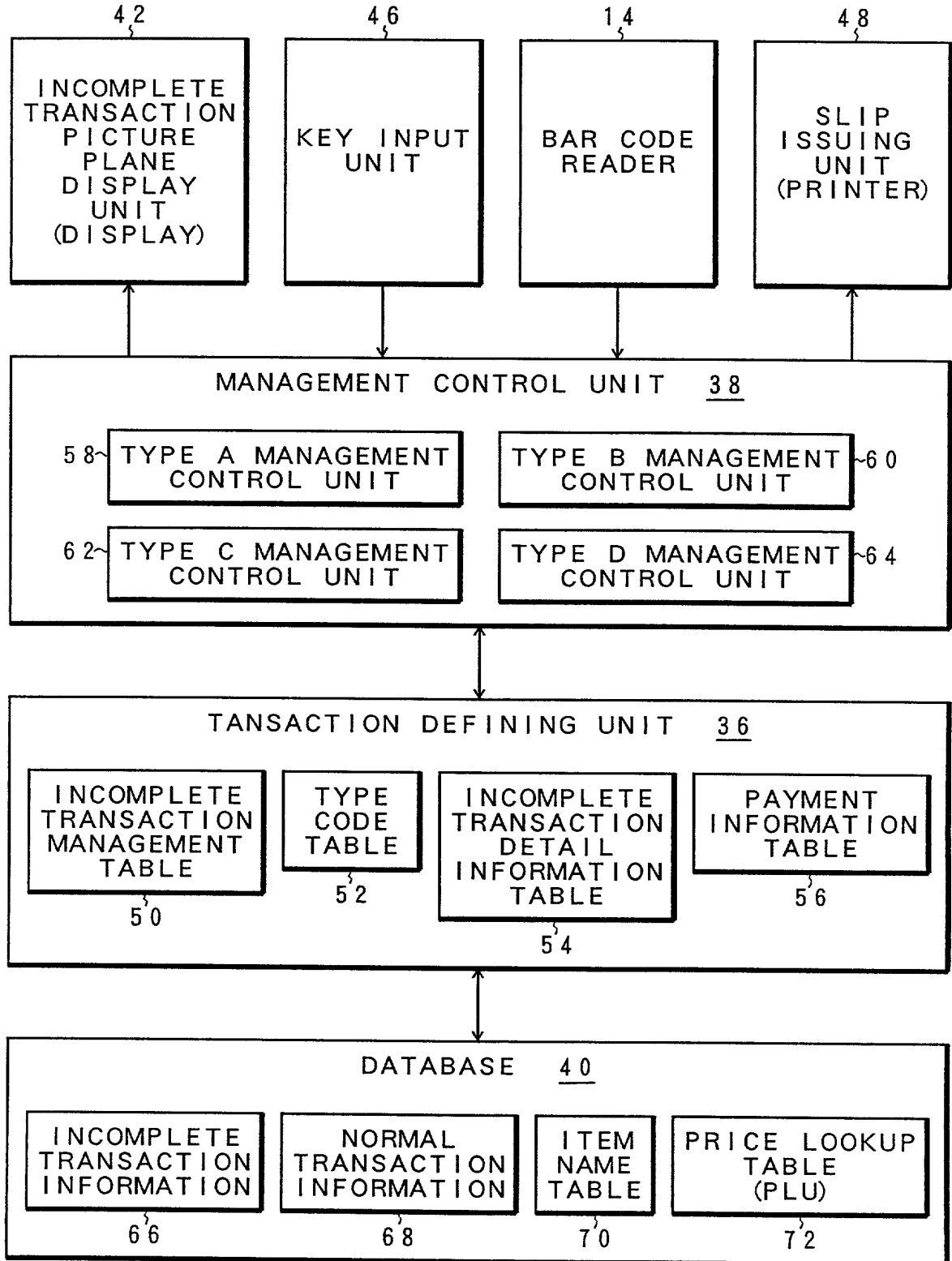
a management control unit for designating one of said plurality of kinds of unsettled transaction types by an interactive operation with the operator and managing and controlling processes in a lump from the beginning of the transaction to the end.

FIG. 1

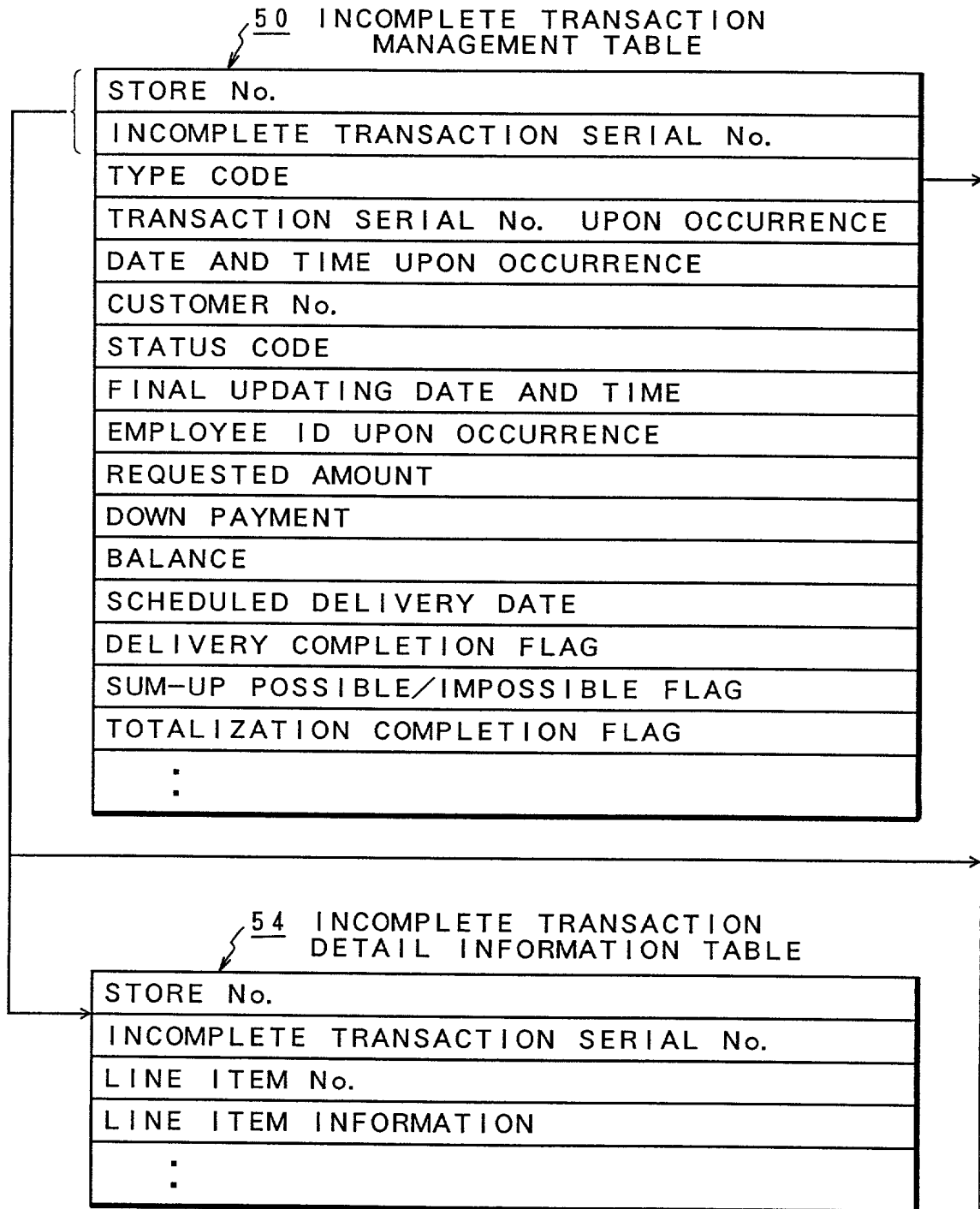


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FIG. 3



Year	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100
1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	



↙

4

FIG. 5B

76 TYPE CODE TABLE FOR DEFERRED
PICKUP TRANSACTION AND ON
THE PRINCIPLE OF COMPLETION

TYPE CODE	B
SUM-UP TIMING	AT THE END OF TRANSACTION
PREPAYMENT NECESSARY /UNNECESSARY FLAG	NECESSARY (TOTAL AMOUNT)
DELIVERING METHOD	POSTDELIVERY
SCHEDULED DELIVERY DATE	AFTER 5 BUSINESS DAYS

FIG. 5D

80 TYPE CODE TABLE FOR DEFERRED
PAYMENT TRANSACTION AND ON
THE PRINCIPLE OF COMPLETION

TYPE CODE	D
SUM-UP TIMING	AT THE END OF TRANSACTION
PREPAYMENT NECESSARY /UNNECESSARY FLAG	UNNECESSARY
DELIVERING METHOD	PREDELIVERY
SCHEDULED DELIVERY DATE	APPOINTED DAY

FIG. 6

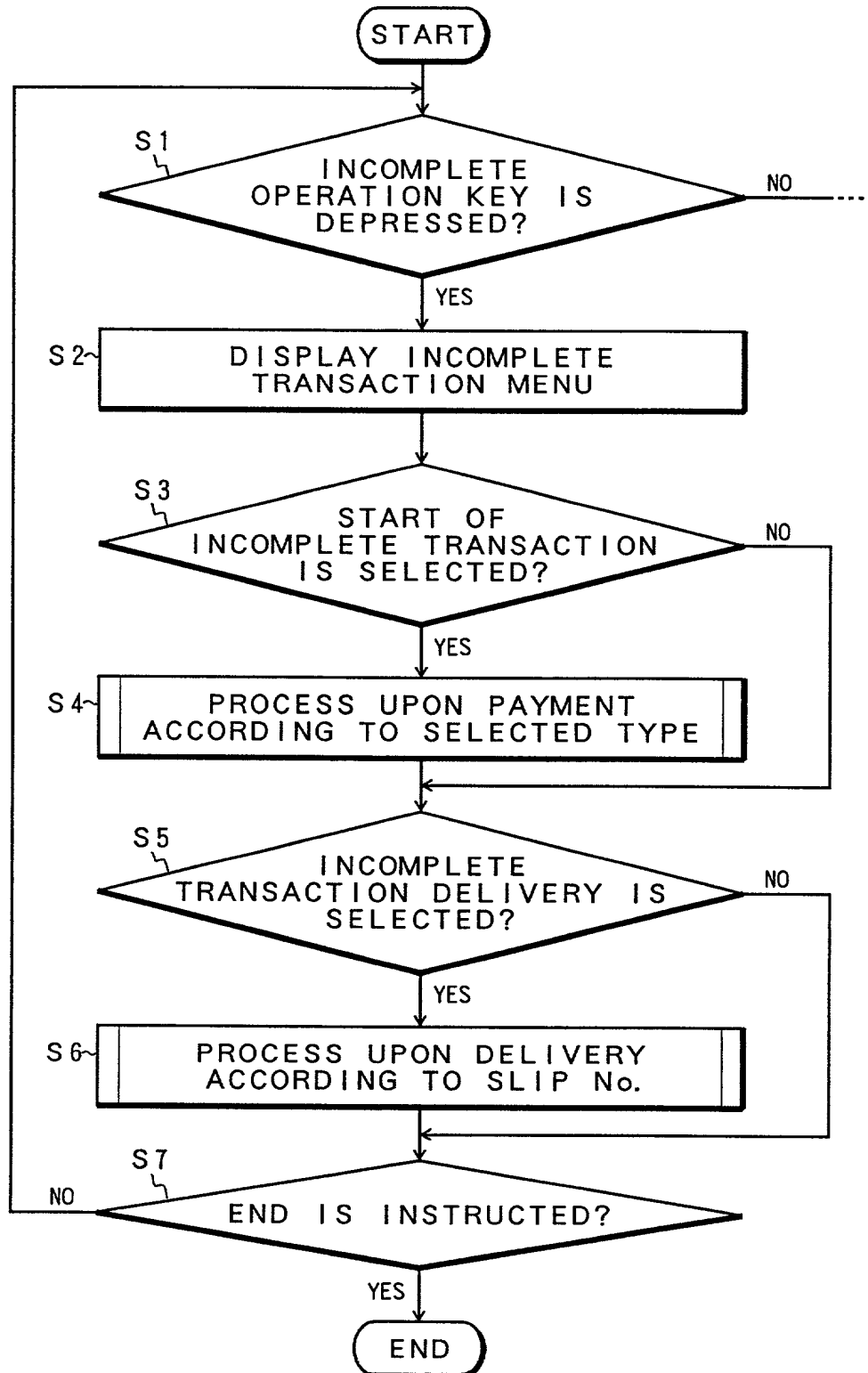


FIG. 7

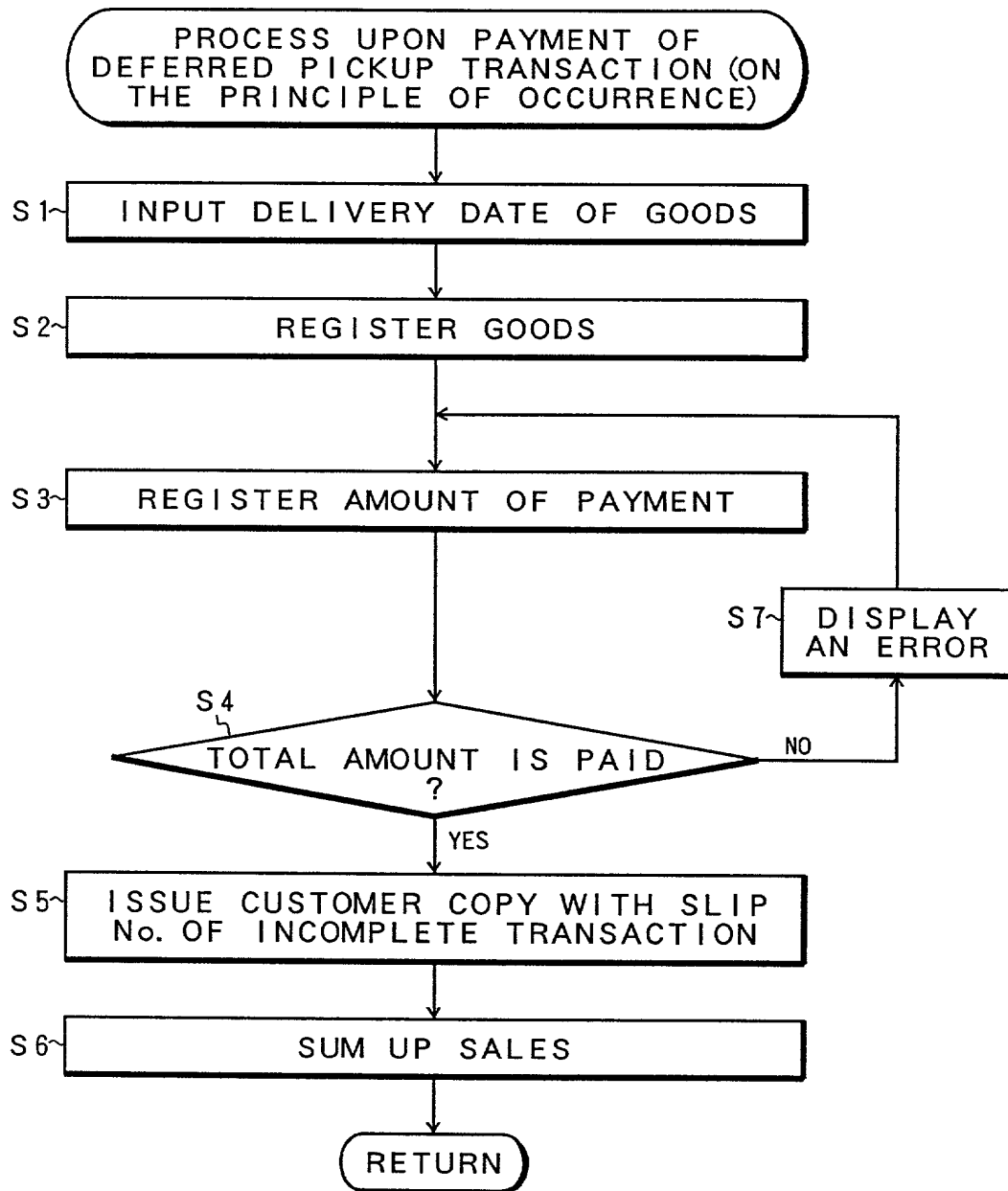


FIG. 8A

82

SALES REGISTRATION

84 REGISTER GOODS.

85

1	

SUBTOTAL ¥0

TAX AMOUNT ¥0

TOTAL ¥0

86 INCOMPLETE END

FIG. 8B

88

INCOMPLETE TRANSACTION MENU

90 ~ ☒ TRANSACTION UPON PAYMENT

92 ~ ☐ TRANSACTION UPON DELIVERY

OK CANCEL

FIG. 8C

94

SELECTION OF INCOMPLETE TRANSACTION TYPE

96~☒ DEFERRED PICKUP TRANSACTION
(ON THE PRINCIPLE OF OCCURRENCE)

98~☐ DEFERRED PAYMENT TRANSACTION
(ON THE PRINCIPLE OF OCCURRENCE)

100~☐ DEFERRED PICKUP TRANSACTION
(ON THE PRINCIPLE OF COMPLETION)

102~☐ DEFERRED PAYMENT TRANSACTION
(ON THE PRINCIPLE OF COMPLETION)

OK CANCEL

FIG. 8D

104

DEFERRED PICKUP TRANSACTION
(ON THE PRINCIPLE OF OCCURRENCE)

INPUT DELIVERY DATE.

106~ 19990928

OK CANCEL

1

2

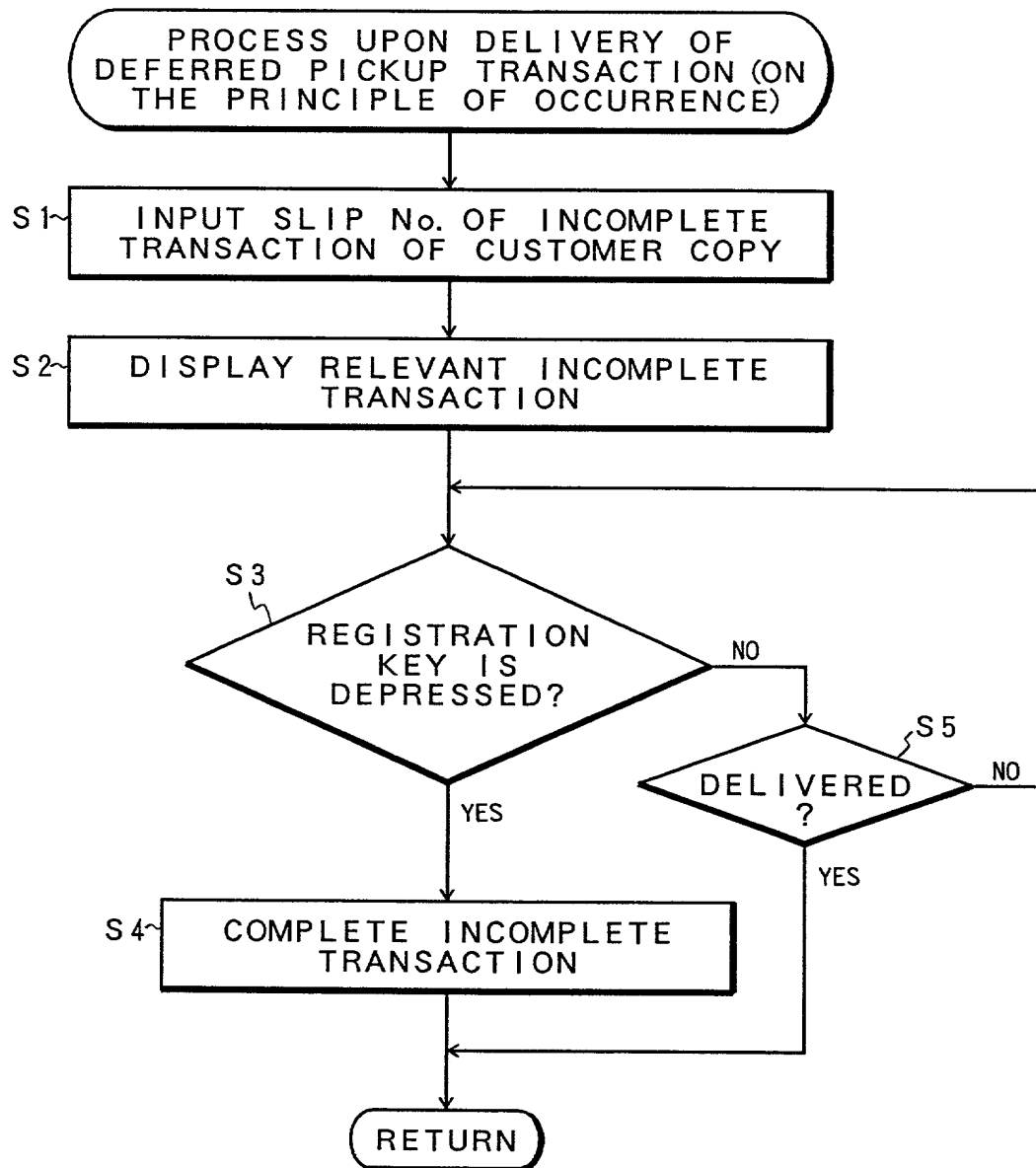


FIG. 10B

INCOMPLETE TRANSACTION MENU	
90 ~ <input type="checkbox"/>	TRANSACTION UPON PAYMENT
92 ~ <input checked="" type="checkbox"/>	TRANSACTION UPON DELIVERY

OK

CANCEL

INCOMPLETE TRANSACTION MENU	
90 ~ <input type="checkbox"/>	TRANSACTION UPON PAYMENT
92 ~ <input checked="" type="checkbox"/>	TRANSACTION UPON DELIVERY

OK

CANCEL

FIG. 10C

108

DELIVERY

INPUT SLIP No.

110

OK CANCEL

FIG. 10D

112

INCOMPLETE TRANSACTION CONFIRMATION
(DEFERRED PICKUP TRANSACTION
• ON THE PRINCIPLE OF OCCURRENCE)

114

SLIP No.	0000001
SALES DATE	99/09/23
SALES AMOUNT	¥18,000
BALANCE	¥0
DELIVERY DATE	99/09/28
COMPLETION OF PAYMENT	<input checked="" type="checkbox"/>
DELIVERED	<input type="checkbox"/> 116
	118

OK CANCEL

FIG. 10E

112

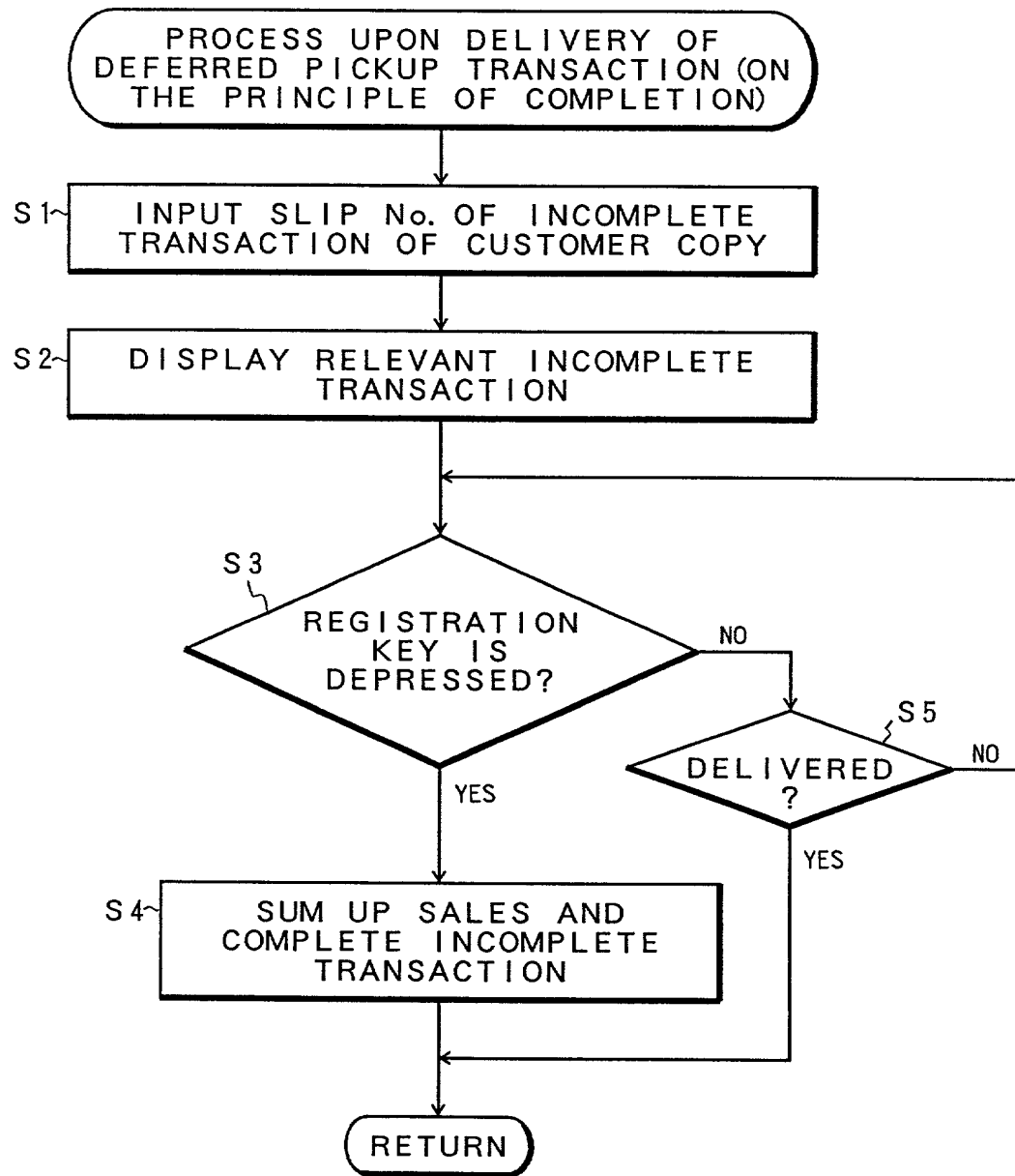
INCOMPLETE TRANSACTION CONFIRMATION
(DEFERRED PICKUP TRANSACTION
• ON THE PRINCIPLE OF OCCURRENCE)

114

SLIP No.	0000001
SALES DATE	99/09/23
SALES AMOUNT	¥18,000
BALANCE	¥0
DELIVERY DATE	99/09/28
COMPLETION OF PAYMENT	<input checked="" type="checkbox"/> 116
DELIVERED	<input checked="" type="checkbox"/> 118

OK CANCEL

FIG. 12



0060541-06900

FIG. 14B

INCOMPLETE TRANSACTION MENU	
90 ~ <input type="checkbox"/>	TRANSACTION UPON PAYMENT
92 ~ <input checked="" type="checkbox"/>	TRANSACTION UPON DELIVERY

OK

CANCEL

INCOMPLETE TRANSACTION MENU	
90 ~ <input type="checkbox"/>	TRANSACTION UPON PAYMENT
92 ~ <input checked="" type="checkbox"/>	TRANSACTION UPON DELIVERY

OK

CANCEL

FIG. 14C

94

SELECTION OF INCOMPLETE TRANSACTION TYPE

96~☐ DEFERRED PICKUP TRANSACTION
(ON THE PRINCIPLE OF OCCURRENCE)

98~☐ DEFERRED PAYMENT TRANSACTION
(ON THE PRINCIPLE OF OCCURRENCE)

100~☐ DEFERRED PICKUP TRANSACTION
(ON THE PRINCIPLE OF COMPLETION)

102~☒ DEFERRED PAYMENT TRANSACTION
(ON THE PRINCIPLE OF COMPLETION)

OK CANCEL

FIG. 14D

115

DEFERRED PAYMENT TRANSACTION
(ON THE PRINCIPLE OF COMPLETION)

INPUT DELIVERY DATE.

115-1~ 19990923

OK CANCEL

FIG. 14E

116-1

INCOMPLETE TRANSACTION CONFIRMATION
(DEFERRED PAYMENT TRANSACTION
• ON THE PRINCIPLE OF COMPLETION)

SLIP No.	0000002
SALES DATE	99/09/23
SALES AMOUNT	¥35,000
BALANCE	¥35,000
DELIVERY DATE	99/09/23
COMPLETION OF PAYMENT	<input type="checkbox"/> 124
DELIVERED	<input type="checkbox"/> 126

OK

CANCEL

RETURN



FIG. 16A

82

SALES REGISTRATION

85

REGISTER GOODS.

84

SUBTOTAL ¥0

TAX AMOUNT ¥0

TOTAL ¥0

86

INCOMPLETE

END

FIG. 16B

88

INCOMPLETE TRANSACTION MENU

90 ~ ☐ TRANSACTION UPON PAYMENT

92 ~ ☒ TRANSACTION UPON DELIVERY

OK

CANCEL

FIG. 16C

115

DELIVERY

INPUT SLIP No.

120

OK

CANCEL

FIG. 16D

116-2

INCOMPLETE TRANSACTION CONFIRMATION
(DEFERRED PAYMENT TRANSACTION
• ON THE PRINCIPLE OF COMPLETION)

SLIP No.

SALES DATE

SALES AMOUNT

BALANCE

DELIVERY DATE

COMPLETION OF PAYMENT

DELIVERED

0000002

99/09/23

¥35,000

¥25,000

99/09/23

☐

☒

124

126

OK

CANCEL

FIG. 16E

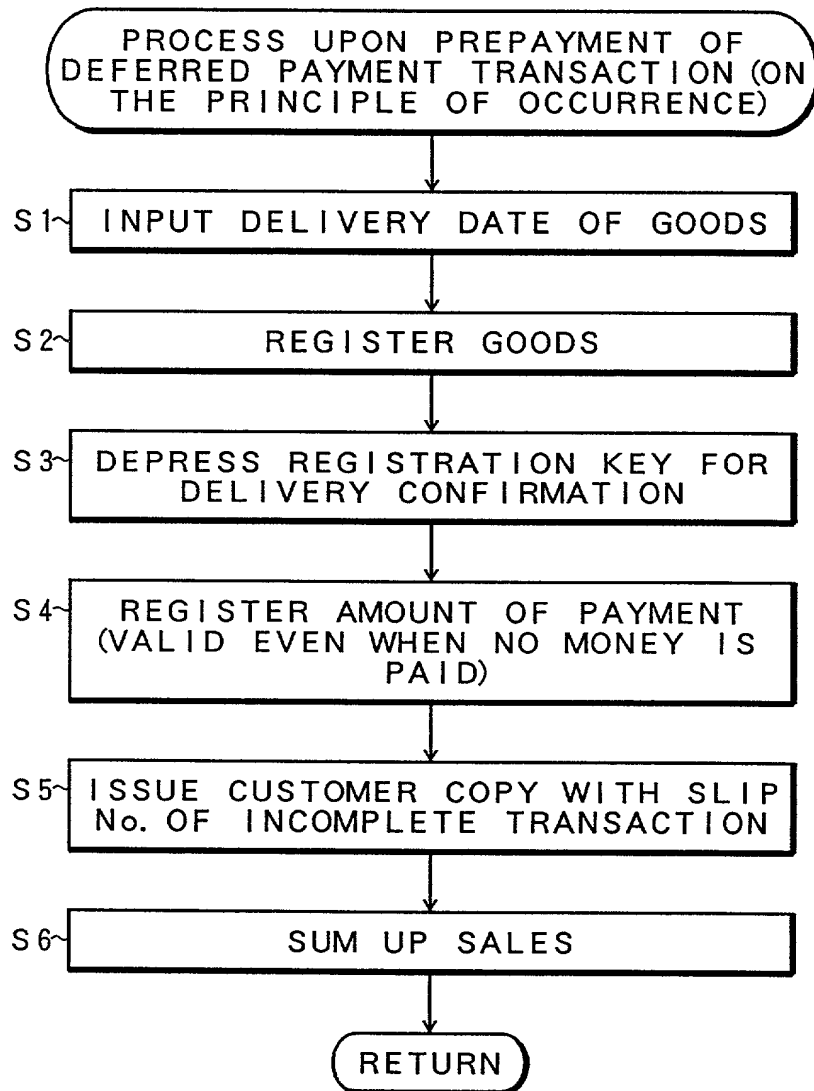
116-3

INCOMPLETE TRANSACTION CONFIRMATION
(DEFERRED PAYMENT TRANSACTION
• ON THE PRINCIPLE OF COMPLETION)

SLIP No.	0000002
SALES DATE	99/09/23
SALES AMOUNT	¥35,000
BALANCE	¥0
DELIVERY DATE	99/09/28
COMPLETION OF PAYMENT	<input checked="" type="checkbox"/>
DELIVERED	<input checked="" type="checkbox"/>

124
126

FIG. 17



(RETURN





FIG. 20A

50 INCOMPLETE TRANSACTION
MANAGEMENT TABLE

STORE No.
INCOMPLETE TRANSACTION SERIAL No.
TYPE CODE
TRANSACTION SERIAL No. UPON OCCURRENCE
DATE AND TIME UPON OCCURRENCE
CUSTOMER No.
STATUS CODE
FINAL UPDATING DATE AND TIME
EMPLOYEE ID UPON OCCURRENCE
OPTION CODE
PAYMENT SCHEDULE CODE
REQUESTED AMOUNT
DOWN PAYMENT
SCHEDULED DELIVERY DATE
DELIVERY COMPLETION FLAG
SUM-UP POSSIBLE/IMPOSSIBLE FLAG
TOTALIZATION COMPLETION FLAG
.

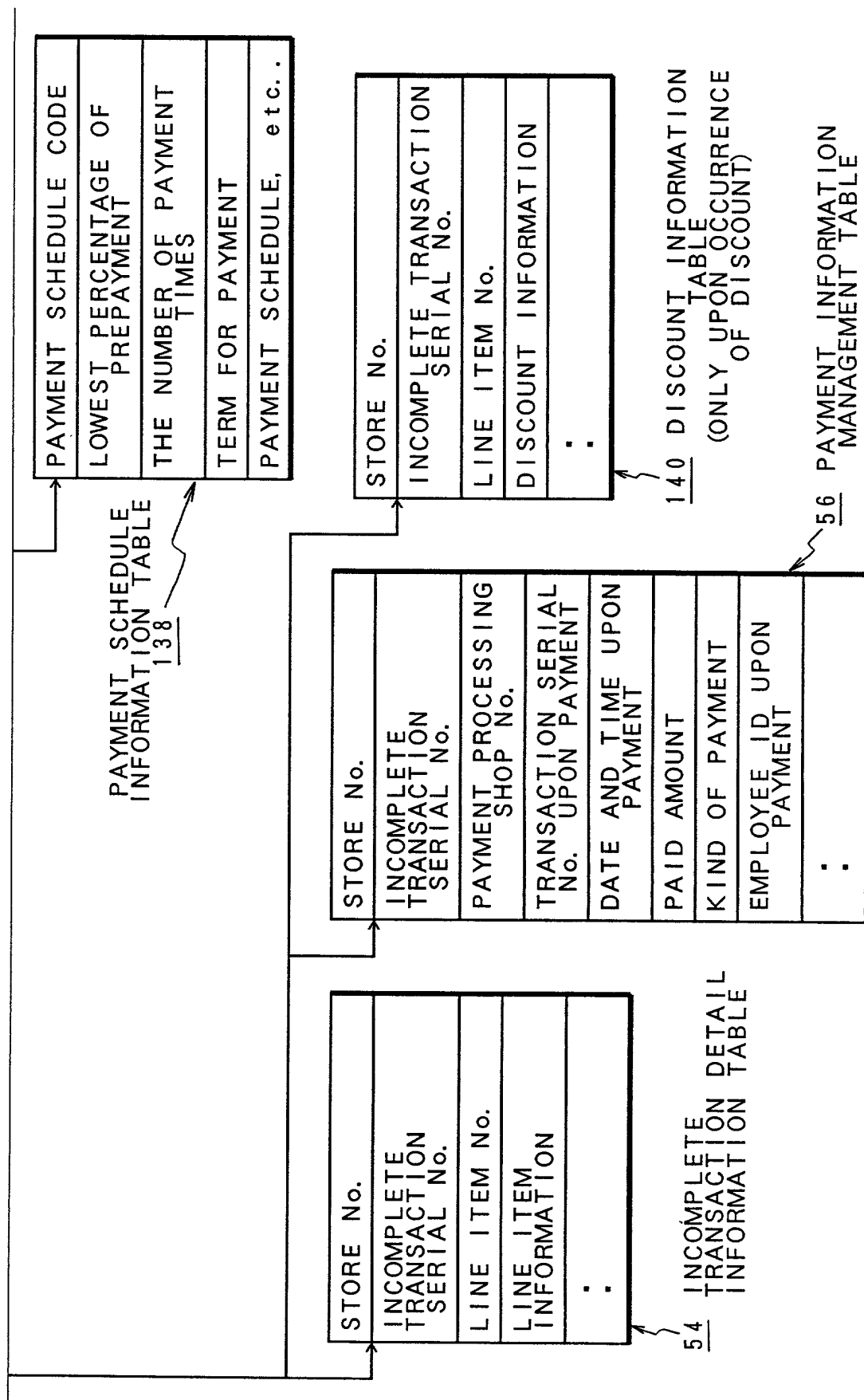
52 TYPE CODE TABLE

TYPE CODE
SUM-UP TIMING
PREPAYMENT NECESSARY /UNNECESSARY FLAG
PREDELIVERY POSSIBLE /IMPOSSIBLE FLAG
PAYING METHOD
DELIVERING METHOD
.

136 OPTION TABLE

OPTION CODE
INCOMPLETE TRANSACTION LONGEST PERIOD
METHOD AFTER THE ELAPSE OF THE LONGEST PERIOD
COMMISSION ON POSTPAYMENT
.

FIG. 20B



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Declaration and Power of Attorney For Patent Application

特許出願宣言書及び委任状

Japanese Language Declaration

日本語宣言書

下記の氏名の発明者として、私は以下の通り宣言します。

As a below named inventor, I hereby declare that:

私の住所、私書箱、国籍は下記の私の氏名の後に記載された通りです。

My residence, post office address and citizenship are as stated next to my name.

下記の名称の発明に関して請求範囲に記載され、特許出願している発明内容について、私が最初かつ唯一の発明者（下記の氏名が一つの場合）もしくは最初かつ共同発明者であると（下記の名称が複数の場合）信じています。

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled

Transaction managing apparatus and
and method and recording medium
storing transaction managing
program therein

上記発明の明細書（下記の欄でx印がついていない場合は、本書に添付）は、

the specification of which is attached hereto unless the following box is checked:

☐ 月 日に提出され、米国出願番号または特許協定条約国際出願番号を _____ とし、
(該当する場合) _____ に訂正されました。

☐ was filed on _____
as United States Application Number or
PCT International Application Number
_____ and was amended on
_____ (if applicable).

私は、特許請求範囲を含む上記訂正後の明細書を検討し、内容を理解していることをここに表明します。

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

私は、連邦規則法典第37編第1条56項に定義されるとおり、特許資格の有無について重要な情報を開示する義務があることを認めます。

I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, Section 1.56.

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Japanese Language Declaration

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私は、米国法典第35編119条(a)-(d)項又は365条(b)項に基づき下記の、米国外の国の少なくとも一ヶ国を指定している特許出願条約365(a)項に基づき国際出願、又は外国での特許出願もしくは発明者証の出願についての外国優先権をここに主張するとともに、優先権を主張している、本出願の前に出願された特許または発明者証の外国出願を以下に、枠内をマークすることで、示しています。

Prior Foreign Application(s)

外国での先行出願

11/298,009

(Number)
(番号)

Japan

(Country)
(国名)

20/10/99

(Day/Month/Year Filed)
(出願年月日)

Priority Not Claimed

優先権主張なし

(Number)
(番号)(Country)
(国名)(Day/Month/Year Filed)
(出願年月日)

二

私は、第35編米国法典119条(e)項に基づいて下記の米国外特許出願規定に記載された権利をここに主張いたします。

(Application No.)
(出願番号)(Filing Date)
(出願日)(Application No.)
(出願番号)(Filing Date)
(出願日)

私は、下記の米国法典第35編120条に基づいて下記の米国外特許出願に記載された権利、又は米国外を指定している特許協力条約365条(c)に基づき権利をここに主張します。また、本出願の各請求範囲の内容が米国法典第35編112条第1項又は特許協力条約で規定された方法で先行する米国外特許出願に開示されていない限り、その先行米国外出願書提出日以降で本出願書の日本国内または特許協力条約国際提出日までの期間中に入手された、連邦規則第37編1条56項で定義された特許資格の有無に関する重要な情報について開示義務があることを認識しています。

(Application No.)
(出願番号)(Filing Date)
(出願日)(Status: Patented, Pending, Abandoned)
(現況: 特許許可済、係属中、放棄済)(Application No.)
(出願番号)(Filing Date)
(出願日)(Status: Patented, Pending, Abandoned)
(現況: 特許許可済、係属中、放棄済)

私は、私自身の知識に基づいて本宣言書中で私が行なう表明が真実であり、かつ私の入手した情報と私の信じることに基づき表明が全て真実であると信じていること、さらに故意になされた虚偽の表明及びそれと同等の行為は米国法典第18編第1001条に基づき、罰金または拘禁、もしくはその両方により処罰されること、そしてそのような故意による虚偽の声明を行えば、出願した、又は既に許可された特許の有効性が失われることを認識し、よってここに上記のごとく宣言を致します。

I hereby claim foreign priority under Title 35, United States Code, Section 119 (a)-(d) or 365(b) of any foreign application(s) for patent or inventor's certificate, or 365(a) of any PCT International application which designated at least one country other than the United States, listed below and have also identified below, by checking the box, any foreign application for patent or inventor's certificate, or PCT International application having a filing date before that of the application on which priority is claimed.

I hereby claim the benefit under Title 35, United States Code, Section 119(e) of any United States provisional application(s) listed below.

I hereby claim the benefit under Title 35, United States Code, Section 120 of any United States application(s), or 365(c) of any PCT International application designating the United States, listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States or PCT International application in the manner provided by the first paragraph of Title 35, United States Code Section 112, I acknowledge the duty to disclose information which is material to patentability as defined in Title 37, Code of Federal Regulations, Section 1.56 which became available between the filing date of the prior application and the national or PCT International filing date of application.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

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Japanese Language Declaration (日本語宣言書)

委任状： 私は下記の発明者として、本出願に関する一切の手続きを特許庁事務局に対して遂行する弁護士または代理人として、下記の者を指名いたします。（弁護士、または代理人の氏名及び登録番号を明記のこと）

POWER OF ATTORNEY: As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith (list name and registration number)

書類送付元

And I hereby appoint as principal attorneys: David T. Nikaido, Reg. No. 22,663; Charles M. Marmelstein, Reg. No. 25,895; George E. Oram, Jr., Reg. No. 27,931; Robert B. Murray, Reg. No. 22,980; E. Marcie Emas, Reg. No. 32,131; Douglas H. Goldhush, Reg. No. 33,125; Monica Chin Kitts, Reg. No. 36,105; Richard J. Berman, Reg. No. 39,107; King L. Wong, Reg. No. 37,500; Karen K. Costantino, Reg. No. 35,107; James A. Poulos, III, Reg. No. 31,714; Patrick D. Muir, Reg. No. 37,403; Sharon N. Klesner, Reg. No. 36,335; and Murat Ozgu, Reg. No. 44,275; Bradley D. Goldizen, Reg. No. 43,637; and N. Alexander Nolte, Reg. No. 45,689.

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第二共同発明者名		Full name of second joint inventor, if any	
第二共同発明者の署名	日付	Second inventor's signature	Date
住所		Residence	
国籍		Citizenship	
私書箱		Post Office Address	

（第三以降の共同発明者についても同様に記載し、署名をすること）

(Supply similar information and signature for third and subsequent joint inventors.)